Tel. (313) 665-1591

Corporate Office

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RECEIVED

Raymond Jusak Corporate Environmental Engineer

June 5, 1986

Mr. Byron Lane, P.E. Environmental Engineer Department of Natural Resources Fourth Floor State Office Building 301 E. Louis Glick Hwy. Jackson, MI 49201

Dear Mr. Lane:

The attached Plan involving closure at Universal Die Casting, Inc. is submitted for your review. I trust it meets the criteria directive you provided in your April 15, 1986 letter. Project duration is estimated to span forty-five (45) days after commencement, allowing for weather and other conditions beyond our control.

I will await your notification before proceeding. Thank you for your continued direction.

Sincerely,

Raymond Jusak

Corporate Manager of

Environment and Energy

RJ:mab

cc: M. O'Rourke

L. J. Smith

M. Frisch

L. Zackary

CLOSURE PLAN

UNIVERSAL DIE CASTING, INC.

(formerly Hoover Universal, Inc.)

232 Monroe Street
Saline Michigan

UDC Sample Data

<u>Sample</u>	Aroclor 1242	Total PCB
1A	LD	LD
1B	LD	LD
2A	LD	LD
2C	LD	LD
3A	LD	LD
3C	LD	LD
4A	0.92 mg/kg	0.92 kg/kg
4C	1.20 mg/kg	1.20 mg/kg

LD - less than detection limit; limit ranged from 0.59 mg/kg to 0.67 mg/kg during this analysis.

Sample Date - 2/27/86

STATE OF MICHIGAN



JAMES J. BLANCHARD, Governor

Reply To:

4th Floor State Office Building 301 E. Louis Glick Hwy. Jackson, MI 49201

DEPARTMENT OF NATURAL RESOURCES

RONALD O. SKOOG, Director

April 15, 1986

Mr. Raymond Jusak Corporate Environmental Engineer Hoover Universal, Inc. 825 Victors Way P.O. Box 1003 Ann Arbor, Michigan 48106

Subject:

Universal Die Casting, Inc.

Saline, Michigan

Dear Mr. Jusak:

NATURAL RESOURCES COMMISSION

THOMAS J. ANDERSON

MARLENE J. FLUHARTY

STEPHEN F. MONSMA

O. STEWART MYERS

HARRY H. WHITELEY

E. R. CAROLLO

Attached are the analytical results of the soil samples taken at the Universal Die Casting (UDC) Saline Plant site on February 27, 1986. You will note that low levels of PCB were present in two of the eight samples taken; no PCB was detected in the remaining samples.

This sampling work essentially completes that portion of the 1983 Hydrogeologic Evaluation pertaining to the black-oily substance (BOS) found to contaminate subsurface soils at the UDC plant site. A plan of remedial action should now be developed. This plan should contain provisions for ending the venting of BOS to the Saline River, and the prevention of its movement to adjacent properties. Please submit the plan to this office by May 30, 1986.

If you should have any questions or comments, feel free to contact me.

Sincerely,

Byren Lane, P.E.

Environmental Engineer

Surface Water Quality Division

(517) 788-9598

BL:rg

Attachment

cc: Dan Judson, UDC

Matthew Frisch, GWQD, Geo.

TABLE OF CONTENTS

Section I

Written closure plan

Section II

Soil borings map

Section III

Perimeter barrier and sample location map

Section IV

Barrier details

Section V

Logs of sample borings

DESCRIPTION OF CONDITIONS

Oil has been determined to exist in a soil stratum located within the southeast portion of property owned by Universal Die Casting, Inc., 232 Monroe Street, Saline, Michigan. The perimeter of the oil plume, its depth, and the groundwater flow direction has been determined.

The oil is stratified in a layer of sand and sand/pebbles which overlays a gray plastic clay. The oil impregnated layer occurs at a depth under the soil surface beginning at about 6'0" to 10'0" and proceding to the clay layer which is typically encountered at a depth of 10'0" to 12'0" from surface soil.

Utilizing this information, a plan of closure has been developed as follows.

CLOSURE PLAN

It is anticipated that closure will take place in five stages: cutoff wall, strip soil, excavate, sample/analyze, and backfill. The area containing oil as depicted in drawing Sl will be addressed. Details of each stage is provided below.

Cutoff Wall — on all boundaries except riverside, a ditch approximately 2' 0" in width (see detailed drawing Dl) will be installed around the perimeter of the area containing oil (see drawing S2). This wall will consist of a soil type that has a permeability coefficient sufficient to minimize infusion of groundwater into the work area and simultaneously restrict oil from exuding out of the area. The wall will be placed at a depth extending into the underlying clay structure forming a keyed in dike.

The work area bordering the Saline River likewise will be isolated by a soil barrier (see detail drawing D2) which will connect to the soil walls extending from the soil portions of the project. Thus the work area will be protected from internal/external liquid migration during subsequent closure stages.

Strip Soil — within the boundaries of the cutoff wall visually clean surface soil will be stripped and stockpiled outside of the boundaries for later use as backfill.

Excavation - Contaminated soil will be excavated and loaded onto transport vehicles for appropriate disposal.

Excavation will occur from within the cutoff wall boundaries extending to the depth of underlying clay.

Free liquid concentration due to rainfall or as encountered during excavation will be evaluated for separation (oil/water) qualities. Clean water, that which is determined to contain less than 10.0 mg/l of oil will be discharged to the Saline River. Free oil will be evacuated for proper disposition (reclaim/disposal).

If sufficient oil/water separation is not attainable, free liquid will be solidified by add mixing a solid stabilizer (lime, flue dust, etc.) within the cutoff wall boundary. The solidified mixture will then be removed for disposal.

Sampling/Analysis - samples will be retrieved from points of approximate equal distribution throughout the work area (see drawing S2). Samples will be extracted using a trier from a depth beginning 4" to 6" beneath sample soil surface and progressing to a total depth of 12" to 18". Nine samples in total will be taken.

Samples will be evaluated for oil and grease content using sample analysis method 413.1 as given in <u>Test</u> <u>Methods For Analysis of Water and Wastes</u>, publication <u>EPA-600/4-79-020</u>. The area intersecting sample points between each sample point that tests above an oil and grease concentration of 10.0 mg/l will be excavated an additional depth of 18" and resampled: this process will be repeated until a clean area is determined.

Backfill - The entire work area will be backfilled utilizing stockpiled soil and clean soil fill. Final grade will be returned to original elevations. Barrier soil used at the river will be placed within original bank boundaries. The river bank will be restabilized with rock or appropriate material to prevent undo erosion.

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SAL DIE CASTING, INC.

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00160E 57, SALINE, MICH.

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CONTEMPLED SAMPLES

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LEGEND

O = CONTAMINATED _ SAMPLES

A = CLEAR SAMPLES

X : EAMPLE D (Fallow Polyton X)

ERSAL DIE CASTING INC.

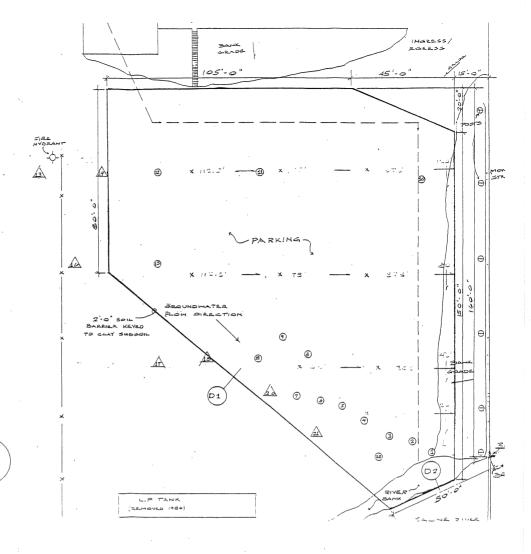
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MONROL ST, SALINE, MICH.

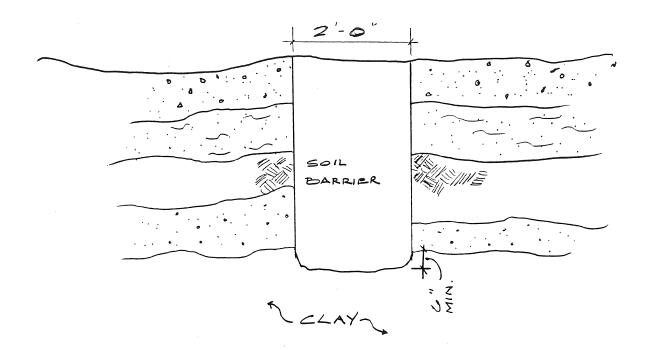
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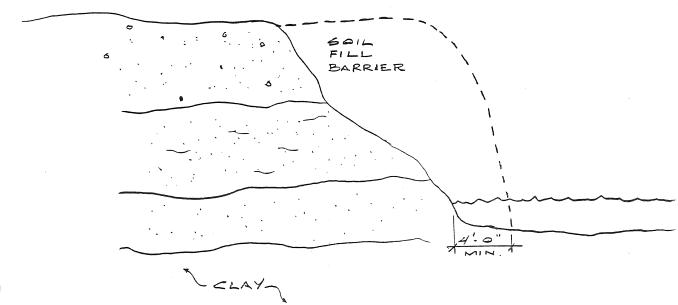
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Section IV Barrier details



(D1



(D2)

Section V - Logs of sample borings

RECORD OF SUBSURFACE EXPLORATION

Boring_____B1

Project Name: Universal Die Casting				ate of B	oring: _	04-2	4-85
Site:Saline, Michigan			F	Project N	o.:	407	-55006
DESCRIPTION	DEPTH	SAMPLE	N	a _u	Q _p	M _C	REMARKS
SAND, medium, brown, fill, moist Concrete SAND & STONES, medium, brown, occasional concrete SAND, coarse, black, wet SILTY CLAY, grey, moist	3'6" 7'6"-		N	Qu	Q _p	Mc	Heavy — Groundwater Encountered
End of Boring							

RECORD OF SUBSURFACE EXPLORATION

Proj	ect Name: Universal Die Casting	Universal Die Casting				Date of Boring: _ Project No.:			
	Saline, Michigan	Saline, Michigan							
	DESCRIPTION	DEPTH	SAMPLE	N	Qu	Qp	Mc	REMARKS	
	SAND & STONES, medium, moist	2'0"						- -	
_		-						-	
_	SAND & SILT, medium, brown, moist	7'0" -						-	
FI	SILTY CLAY, organic	8'0'						Heavy	
FL	SAND, coarse, black & grey, wet	10'0"						Groundwater Encountered	
	End of Boring	-						- -	
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RECORD OF SUBSURFACE EXPLORATION

Pro	ject Name: Universal Die Casting			C	ate of E	Boring: _	04-2	4-85	
Site	:Saline, Michigan			F	Project No.:			407-55006	
	DESCRIPTION	DEPTH	SAMPLE	N	au	Qp	Mc	REMARKS	
	SURFACE——SURFACE———SAND & STONES, medium, fill, moist	3'0"						-	
	SILT, SAND & CLAY, variegated, moist SAND, coarse, grey and black, wet	8'6" - - 9'6'						₩	
	SILTY CLAY, grey, moist End of Boring	10'0"						Encountered _	
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RECORD OF SUBSURFACE EXPLORATION

Boring_____B4

Proj	ect Name: <u>Universal Die Casting</u>				Date of E	Boring: _	04-2	4-85
Site	Saline, Michigan			F	Project N	lo.:	407-	55006
	DESCRIPTION	DEPTH	SAMPLE	N	au	Q _p	Mc	REMARKS
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F	SAND, coarse, grey and black,	-						<u> </u>
	wet	10'0'	4					Heavy =
			1			·		Groundwater -
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RECORD OF SUBSURFACE EXPLORATION

Boring.	B6
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Project Name: <u>Universal Die Casting</u>				Date of E	Boring: _	04-24	1 - 85	
Site: Saline, Michigan				Project N	lo.:	407-55006		
DESCRIPTION	DEPTH	SAMPLE	N	Qu	Qp	Mc	REMARKS	
SURFACE———							_	
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SAND, SILT & CLAY, fill, moist	4'0"]						
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CLAY, organic, moist	9'6"	1 1		1				
SAND, coarse, grey, and black,								
wet	11'0"]					Heavy	
- SILTY CLAY, grey, moist	12'6"	<u> </u>					Groundwater -	
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End of Boring]			•			
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RECORD OF SUBSURFACE EXPLORATION

Project Name: Universal Die Casting		* - **			Date of E	Boring: _	04-25-85		
Site:	Saline, Michigan				Project N	lo.:	407-55006		
	DESCRIPTION	DEPTH	SAMPLE	N	au	Qp	Mc	REMARKS	
	SURFACE————————————————————————————————————								
SAND & STO	NES, medium, fill, moist	2'0" -	1						
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- - SILT & CLA	Y, organic, moist		1						
		8'6" -]					∇	
SAND, medi	um, grey & black, wet	10'0"	1					Heavy	
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End of Bor	ing	-	1					Encountered	
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RECORD OF SUBSURFACE EXPLORATION

Boring_____B8

Project Name: Universal Die Casti	ng			ate of E	Boring: _	04-2	5-85
Site: Saline, Michigan			F	Project N	lo.:	407-	55006
DESCRIPTION	DEPTH	SAMPLE	N	Qu	Q _p	Mc	REMARKS
SURFACE———							_
SAND & STONES, medium, fill, mois	t 3'0" -						-
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F							
CLAY, organic, moist	8'0"						\ <u>\{\bar{\bar{\bar{\bar{\bar{\bar{\ba</u>
SAND, medium, grey & black, wet	9'0"						Heavy Groundwater
SILTY CLAY, grey, moist	10'0"						Encountered]
End of Boring	-						-
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RECORD OF SUBSURFACE EXPLORATION

Project Name: Universal Die Casting			[Date of E	Boring: _	04-2	5-85
Site:Saline, Michigan					lo.:	407-55006	
DESCRIPTION	DEPTH	SAMPLE	N	Qu	Q _p	Mc	REMARKS
SURFACE————————————————————————————————————	t 3'6" -						-
 SILTY CLAY, organic, moist SAND, coarse, grey & black, wet 	7'6" - 9'6" -						<u>\$\bar{\bar{\alpha}}\$</u> =
SILTY CLAY, grey, moist End of Boring	10'd"						Heavy Groundwater _ Encountered
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RECORD OF SUBSURFACE EXPLORATION

Project Name: Universal Die Casting				Date of E	Boring: _	04-2	5-85
Site: Saline, Michigan			F	Project N	lo.:	407-	55006
DESCRIPTION	DEPTH	SAMPLE	N	Qu	a _p	Mc	REMARKS
SURFACE————							_
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CAND CLAV & CTONES modium fill	_						
SAND, CLAY & STONES, medium, fill moist	' 8'0" -	4					
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SAND, black, mix, wet CLAY, organic, moist	<u> 8'6'</u>						Heavy
CLAY, organic, moist	9'6"						Groundwater _ Encountered _
CLAY, variegated, moist	10'0						-
End of Boring					Í		
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RECORD OF SUBSURFACE EXPLORATION

Project Name: Universal Die Casting				ate of B	oring: _	04-2	5-85
Site: Saline, Michigan				Project N		407-55006	
DESCRIPTION	DEPTH	SAMPLE	N	Qu	a _p	Mc	REMARKS
SURFACE							_
CAND & STONES modium fill moist	21011 -	1					_
SAND & STONES, medium, fill, moist	3.0.						_
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F	-						Heavy -
SAND & SILT, medium, brown, moist	8'0"						Groundwater -
SAND, coarse, grey & black, wet	10'6"						Encountered -
- - SILTY CLAY, grey, moist	12'6"-				,		-
End of Boring							_
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RECORD OF SUBSURFACE EXPLORATION

Project Name: Universal Die Casting			[Date of Boring:			04-25-85		
Site:Saline, Michigan				Project N	o.:	407-55006			
DESCRIPTION	DEPTH	SAMPLE	N	Qu	a _p	Mc	REMARKS		
SURFACE									
SAND & STONES, medium, fill, moist	2'0"]]					-		
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SAND & SILT, medium, brown, moist	7'0"	1					-		
SILT & CLAY, organic, moist	9'0" -	1							
SAND, medium to coarse, grey andblack, wet	11'6"-						Heavy		
- Dracky field	-						Groundwater]		
SILTY CLAY, grey, moist	12'6						Encountered _		
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RECORD OF SUBSURFACE EXPLORATION

Boring.	B13
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roject Name: Universal Die Casting				Date of E	Boring: _	04-2	5-85
ite:Saline, Michigan				Project N	lo.:	407-55006	
DESCRIPTION	DEPTH	SAMPLE	N	Qu	Q _p	Mc	REMARKS
SURFACE							
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SAND, medium, brown and clay,	-	1					
content, moist	6'0"						
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SILT & CLAY, variegated, moist,	-	1					Medium
layers of peat	10'0"						Groundwate Encountere
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RECORD OF SUBSURFACE EXPLORATION

Project Name: <u>Universal Die Casting</u>				Date of B	oring: _	04-	25-85
Site:Saline, Michigan			F	Project N	o.:	407	-55006
DESCRIPTION	DEPTH	SAMPLE	N	Qu	Ωp	M _C	REMARKS
SURFACE							•
SAND & STONES, medium, fill, moist	2'6" _						
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	710" -						•
orang a ozzry moznamy za ozary	7'0" -						
CLAY, organic, moist	9'0"						<u> </u>
							Heavy
	10'd"						Groundwater .
- SILTY CLAY, grey, moist - End of Boring	_				·		Encountered -
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RECORD OF SUBSURFACE EXPLORATION

Project Name: Universal Die Casting				Date of B	oring: _	04-25-85		
Site: Saline, Michigan				Project N	o.:	407-55006		
DESCRIPTION	DEPTH	SAMPLE	N	Qu	a _p	Mc	REMARKS	
SURFACE							-	
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SAND & STONES, medium, fill, moist	3'6" -						-	
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							Heavy	
CLAY, organic, moist	7'6" -						Groundwater _	
	-	1					Encountered _	
SAND, coarse, grey & black, wet	10'0"	1					_	
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RECORD OF SUBSURFACE EXPLORATION

Project Name: <u>Universal Die Casting</u>				Date of E	Boring: _	04-2	25-85		
Site:Saline, Michigan				Project No.:			407-55006		
DESCRIPTION	DEPTH	SAMPLE	N	Qu	Q _p	Mc	REMARKS		
SURFACE									
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SAND & SILT, medium, fill, moist	3'0"	1 1							
•	-	1 1	•				∇		
	•	1 1					Heavy		
CLAY, organic, moist	7'0"						Groundwater		
SAND, medium, grey, wet, and streaks of peat	9'0" -	1					Encountered		
Streams of pear	1	1							
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SILTY CLAY, grey, moist	10'0	1 1		ļ			V.		
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RECORD OF SUBSURFACE EXPLORATION

Boring B17	
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Project Name: Universal Die Casting				Date of E	Boring: _	04-25-85		
Site:Saline, Michigan				_ Project No.:		407-55006		
DESCRIPTION	DEPTH	SAMPLE	N	Qu	Q _p	Mc	REMARKS	
SURFACE-		$\{ - \}$						
SAND & STONES, medium, fill	2'6"	1						
CLAY, organic, moist	4'0"	1					$\overline{\Delta}$	
SAND & SILT, medium, variegated,							-	
moist SAND, coarse, brown, wet and	6'0"	-					Heavy	
streaks of peat	8'0"	1					Groundwater Encountered	
SILTY CLAY, grey, moist	10'0"	1					Encountered	
End of Boring	-]						
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RECORD OF SUBSURFACE EXPLORATION

Project Name: Universal Die Casting			C	Date of E	e of Boring:		5-85	
	Saline, Michigan				Project N		407-55006	
	DESCRIPTION	DEPTH	SAMPLE	N	Q _u	a _p	Mc	REMARKS
	SAND & STONES, medium, fill, moist	2'6" -						-
	SILT & CLAY, variegated, moist	5'0"						Heavy
	CLAY, organic, moist SAND, coarse, grey, wet	6'6" 8'0"		ï				Groundwater = Encountered =
EL	SILTY CLAY, grey, moist	10'0				,		-
_	End of Boring	-				*		_
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RECORD OF SUBSURFACE EXPLORATION

Project Name: Universal Die Casting				Date of B	oring: _	04-25-85		
Site:Saline, Michigan				Project N	o.:	407-55006		
DESCRIPTION	DEPTH	SAMPLE	N	Qu	Q _p	Mc	REMARKS	
SURFACE———		-						
SAND & STONES, medium, fill, moist	2'0"	-						
SAND & STONES, medium, fill, moist SAND & SILT, medium, variegated,	1	1						
moist	4'0"]						
•		4						
- CLAV enganis moist	7'0"	4					<u> </u>	
CLAY, organic, moist	1/ 0	-					Heavy	
SAND, medium to coarse, grey and	1	1					Groundwater	
black, wet	8'01				-		Encountered	
SILTY CLAY, grey, moist	10'd"	4 1						
- Full of Domina	.	-			*			
- End of Boring		1						
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RECORD OF SUBSURFACE EXPLORATION

ject Name: Universal Die Casting			Date of Boring:			04-25-85		
Site:Saline, Michigan					o.:	107 5500		
DESCRIPTION	DEPTH	SAMPLE	N	Q _u	Q _p	Mc	REMARKS	
SURFACE								
SAND & STONES, medium, fill, moist	2'0"		,				_	
SAND & SILT, medium, brown, moist	4'0" -						No - Groundwater -	
-	•						Encountered =	
]						
CLAY, organic, moist	9'0".							
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SILTY CLAY, grey, moist	10'0"			·			_	
End of Boring	-						_	
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RECORD OF SUBSURFACE EXPLORATION

Boring_____B21

Project Name: Universal Die Casting			D	ate of B	oring: _	04-2	5-85
Site: Saline, Michigan		Project No.:		407-55006			
DESCRIPTION	DEPTH	SAMPLE	N	Qu	Q _p	Mc	REMARKS
SURFACE—							_
SAND & STONES, medium, fill, moist	2'0" -						_
	_						_
	-						
SAND & SILT, medium, brown, moist	6'0"						🚡 🗆
	-						Heavy -
SAND, coarse, grey, wet	9'0"					ı	Groundwater -
	- ا						Encountered =
SILTY CLAY, grey, moist	10'0''						_
	10 4						_
End of Boring							
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RECORD OF SUBSURFACE EXPLORATION

Project Name: <u>Universal Die Casting</u>	ct Name:Universal Die Casting			Date of E	Boring: _	04-25-85		
				Project N		407 55006		
DESCRIPTION	DEPTH	SAMPLE	N	Qu	Q _p	Mc	REMARKS	
SURFACE								
- -		1						
- SAND & STONES, medium, fill, moi	st 3'6" -] [
		1						
<u>.</u>]						
- CLAY, organic, moist	7'6" -	1						
•]					i	
SAND, coarse, grey & black, wet	10'6'				İ		Heavy Groundwater	
SILTY CLAY, grev, moist	-	1					Encountered	
End of Boring		1						
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